AMSAT News Service Weekly Bulletins
Issue: ANS-071
Date: 2006-03-12
Sources: amsat-ans-2006-ans-071-weekly.txt

AMSAT NEWS SERVICE
ANS-071

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:
ans-editor@amsat.org

********** AMSAT 2006 Space Symposium **********

The AMSAT web team has posted informational pages on the AMSAT web site. You can find the announcement with many links at:
http://www.amsat-org/amsat-new/symposium

Future announcements including the Call For Papers, Online Registration and Online Hotel Registration will be available approximately 1 April 2006.

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In this edition:

* AMSAT Announces Director of Education
* AMSAT Plans for Dayton Hamvention
* Emergency Aboard CUTE-1.7, Satellite Recovered
* AO-7 To Enter Eclipse Again
* PCSAT-1 Emerges From Eclipse
* SA AMSAT Asks for Help for Amateur Radio Payload on ZASAT
* Amateur Satellite Antenna Polarization Database
* CUTESATs Receive OSCAR Designations
* ARISS Status for the week of March 6, 2006

SB SAT @ AMSAT $ANS-071.01
AMSAT Announces Director of Education

AMSAT News Service Bulletin 071.01
From AMSAT HQ SILVER SPRING, MD.
March 12, 2006
To All RADIO AMATEURS
BID: $ANS-071.01

AMSAT is very pleased to announce that Dr. H. Paul Shuch, N6TX, has agreed to accept the position of Director of Education. Paul, who received his Ph.D. from the University of California, Berkeley, brings to the AMSAT External Relations Team an extensive background in teaching, curriculum development, communications, and engineering.

Paul's highest priority as Director of Education will be integrated curriculum development at all levels (K through PhD), with emphasis on using satellites in the classroom, to enhance the teaching of science, math, geography, social studies, technology, and the social sciences. Paul explained, "I will invite all teachers within AMSAT to share with me their current, past, or planned use of satellites in the classroom, their instructional materials, and their desires in terms of future curricular development."

One area in which AMSAT already has a rich history of educational activities is human spaceflight, most recently through the ARISS Program. Paul states, "I would not presume to modify these existing programs in any way. However, ARISS contacts should not be an end unto themselves." ARISS generates a great deal of enthusiasm, leading up to a contact with the Astronauts on the International Space Station. Coordinating closely with Frank Bauer, AMSAT VP Human Spaceflight, Paul will be seeking ways we can encourage ARISS schools and teachers to take the next step, with programs to leverage that enthusiasm into an ongoing interest in math, science and amateur radio.

Another key area of attention for Paul as Director of Education will be Cubesats. Paul notes that "there is a definite educational mission in satellite construction, which goes far beyond the production and launch of a payload." Paul is seeking to find a way to get satellite builders talking to satellite users, in an educational setting. Paul explains, "It is my hope that by finding specific educational applications of existing and planned small satellites. By providing proper training to satellite developers, we will get them fired up about supporting the classroom use of their creations."

Executive Vice President of AMSAT and External Relations Team leader Lee McLamb, KU4OS said, "I am very excited that with Paul we've found such a talented and motivated person to serve as AMSAT Director of Education". Lee continued, "I'm sure that as Paul develops his educational team, AMSAT, students, and the whole educational community will benefit in ways we haven't yet imagined."

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SB SAT @ AMSAT $ANS-071.02
AMSAT Plans for Dayton Hamvention

AMSAT News Service Bulletin 071.02
From AMSAT HQ SILVER SPRING, MD.
March 12, 2006
To All RADIO AMATEURS
BID: $ANS-071.02

Martha at AMSAT HQ announced this week that AMSAT has a limited number of rooms for the Dayton Hamvention which will occur May 19 - 21. We will be staying at the Hampton Inn at Fairborn. All reservations MUST be made through the AMSAT office. Martha will need a credit card to hold the room. Also include your arrival and departure dates and a daytime phone number.

You can reach Martha at the AMSAT office via:
Phone - 301-589-6062
Fax - 301-608-3410
email - martha@amsat.org

[ANS thanks Martha for the above information]

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SB SAT @ AMSAT $ANS-071.03
Emergency Aboard CUTE-1.7, Satellite Recovered

AMSAT News Service Bulletin 071.03
From AMSAT HQ SILVER SPRING, MD.
March 12, 2006
To All RADIO AMATEURS
BID: $ANS-071.03

Early in the morning on March 9, 2006 controllers sent a routine reset command to the Cute-1.7 satellite to set the low power consumption mode. At this point controllers could no longer hear the CW beacon on 437.385 MHz. Controllers tried sending the reset command on the following pass with no result.

An emergency condition aboard CUTE-1.7 was declared which was attributed to unknown runaway process in the on board computer. Their plan was to continue to try to reset the computer by commands sent from the control station in Tokyo.

Controllers had to wait until CUTE-1.7 was within range of control stations. Late in the day on March 9 the reset command was successful in recovering the satellite. The 437.385 MHz beacon could be heard once again. Housekeeping and battery telemetry showed nominal operation by March 10.

CUTE-1.7 has officially been designated CubeSat-OSCAR 56, or CO-56 by AMSAT.

The main web page for CUTE-1.7 is at:
http://lss.mes.titech.ac.jp/ssp/cute1.7/index_e.html

The latest version of the CW Telemetry decoder software can be downloaded from:
http://lss.mes.titech.ac.jp/ssp/cute1.7/software_e.html

Operator reports can read on-line at:
http://lss.mes.titech.ac.jp/ssp/cute1.7/blog/

Designation of CubeSat-OSCAR 56 is on-line at:
http://lss.mes.titech.ac.jp/ssp/cute1.7/news/060310-1_e.html

[ANS thanks the Tokyo Institute of Technology for the above information]

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SB SAT @ AMSAT $ANS-071.04
AO-7 To Enter Eclipse Again

AMSAT News Service Bulletin 071.04
From AMSAT HQ SILVER SPRING, MD.
March 12, 2006
To All RADIO AMATEURS
BID: $ANS-071.04

AO-7 has been in sunlight for its entire orbit for several weeks. With its 30 year old batteries long-dead, AO-7 becomes operational when its solar cells generate enough power to revive the oldest working satellite in the AMSAT fleet. Amateur satellite operators have enjoyed somewhat predictable operation on this bird because it was not reset every eclipse.

Emily, N1DID has run tests based on AO-7's keplerian elements to determine how much longer the satellite would remain in full sun-light. She noted, "It seems that AO-7 will go back into eclipse on ascending passes sometime on March 15th 2006. This means that the 24 hour timer will be reset when the eclipse occurs."

Emily concludes, "It's a very exciting satellite to work and the builders who sacrificed so much of their personal time crafting it should take pride that after so many years it goes on and on."

[ANS thanks Emily, N1DID for the above information]

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SB SAT @ AMSAT $ANS-071.05
PCSAT-1 Emerges From Eclipse

AMSAT News Service Bulletin 071.05
From AMSAT HQ SILVER SPRING, MD.
March 12, 2006
To All RADIO AMATEURS
BID: $ANS-071.05

PCSAT-1, built and controlled by the US Naval Academy Satellite Lab, is another satellite that is operational when its solar cells can generate enough power. Bob, WB4APR, USNA satellite ground station control operator noted, "PCSAT-1 has just entered full sun for its entire orbit. It should be operating normally for the next week for sure." Bob also noted that PCSAT-1 could continue amateur radio packet operation for a few weeks longer if not overloaded.

During this period, PCSAT-2 will be shifted to its 145.825 downlink so that both PCSAT-1 and PCSAT-2 are operating on the same frequency. This will give packet users on 145.825 an APRS link capability over 12 passes per day combined along with some rare dual hop opportunities.

PCSAT2 and PCSAT-1 will operate on 145.825 MHz and ARISS packet will continue operating on 145.800 MHz. Set UNPROTO APRS VIA WIDE2-2 if you want to get lucky with a dual hop. All three birds will recognize VIA ARISS. If PCSAT-1 reverts to W3ADO-1 stop using it until we can get her reloaded. If it resets after March 16th we will lose her until next winter.

Locations of users along with a listing of recently digipeated packets via PCSAT-1 can be viewed on-line at http://pcsat.aprs.org. To view PCSAT-2 users see http://www.findu.com/cgi-bin/pcsat2.cgi.

Included below is a quick summary of the operating policy for satellites in the US Naval Academy fleet:

1) Un-attended beacons are NOT authorized.
2) Operations when PCSAT-1 is in the dark are NOT authorized.
3) Human contacts only. One packet per minute is typical.
4) This will start after 1830z on 9 March.
5) Report seeing any 2 hop telemetry from one spacecraft to the other.

[ANS thanks Bob, WB4APR and the US Naval Academy Satellite Lab for the above information]

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SB SAT @ AMSAT $ANS-071.06
SA AMSAT Asks for Help for Amateur Radio Payload on ZASAT

AMSAT News Service Bulletin 071.06
From AMSAT HQ SILVER SPRING, MD.
March 12, 2006
To All RADIO AMATEURS
BID: $ANS-071.06

South Africa AMSAT is building the amateur payload to be incorporated into ZASAT, South Africa's new satellite. This will include an FM mode

J Transponder and a digitalker. The uplink will be on 2 meters with
the downlink on 70 cm. The Digitalker will announce the satellite ID
and offer opportunities to upload 30 seconds of audio and repeating it
back to earth. The digitalker operating on 2 meters will be an ideal
promotion tool for taking amateur radio into schools.

Hans, ZS6AKV asked for assistance to locate needed components to com-
plete the project in time for a December 2006 launch. What is needed
includes a source to purchase two CMX808A-P4 ICs in dual-inline packages
for the prototype and two CMX808A-E3 in SMD packages for the flight
model.

Contact SA AMSAT at saamsat@intekom.co.za if you can help.

[ANS thanks Hans, ZS6AKV and South Africa AMSAT for the above information]

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SB SAT @ AMSAT $ANS-071.07
Amateur Satellite Antenna Polarization Database

AMSAT News Service Bulletin 071.07
From AMSAT HQ SILVER SPRING, MD.
March 12, 2006
To All RADIO AMATEURS
BID: $ANS-071.07

Alan, WA4SCA is building a database of the antenna polarization
(ie.: linear, LHCP, or RHCP). Once completed this data will be
available to be included with other satellite data such as uplink
and downlink frequencies, operating modes, scheduled times, etc.
This data will be available to be included on the AMSAT web page
or in the Weekly Satellite Report.

Alan's prototype format is shown below for the satellites already
accounted for:

AO-51
T: Linear
V: Linear
U: TX A (usually digital) LHCP
   TX B (usually analog) RHCP
L: Linear
S: Linear

ISS
V: Linear
U: Linear

Information is still needed for VO-52, AO-27, SO-50, PCSAT-1, PCSAT-2,
FO-29, etc. If you can provide the data please contact Alan via e-mail
wa4sca@amsat.org.

[ANS thanks Alan, WA4SCA for the above information]

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SB SAT @ AMSAT $ANS-071.08
CUTESATs Receive OSCAR Designations

AMSAT News Service Bulletin 071.08
From AMSAT HQ SILVER SPRING, MD.

March 12, 2006
To All RADIO AMATEURS
BID: $ANS-071.08

Bill Tynan, W3XO, coordinator of OSCAR numbers issued this statement on behalf of AMSAT this week:

"By the authority vested in me by the AMSAT-NA President, I am pleased to issue your CubeSat amateur satellites the designation CUBESAT-OSCAR-55 or CO-55 for CUTE-1 and CUBESAT-OSCAR-56 or CO-56 for CUTE-1.7.

AMSAT-NA and I wish to congratulate you and the entire Cute-1.7 team, as well as the Tokyo Institute of Technology. Your pioneering work will certainly inspire others to follow you in constructing and launching this very innovative type of spacecraft."

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SB SAT @ AMSAT $ANS-071.09
ARISS Status for the week of March 6, 2006

AMSAT News Service Bulletin 071.09
From AMSAT HQ SILVER SPRING, MD.
March 12, 2006
To All RADIO AMATEURS
BID: $ANS-071.09

1. Ohio School Contact Successful

On Wednesday, March 1, children from Cincinnati Country Day School in Ohio chatted with Bill McArthur, KC5ACR, via the telebridge station VK5ZAI in Australia. Twelve students asked 19 questions. Approximately 180 students, parents and teachers attended the event, and students from Harry Hallyburton Elementary School listened in to prepare for their own contact on March 3.

One daily and three weekly newspapers covered the contact. The audio was webcast, courtesy of Verizon Conferencing, and fed through the EchoLink AMSAT (node 101 377) and JK1ZRW (node 277 208) conference room servers. Forty-one connections were made to Echolink from 13 countries, including Korea, Slovenia and Thailand. IRLP Discovery Reflector 9010 had 5 connections from the USA, Canada, and Australia, with at least two schools listening in.

The Cincinnati Enquirer ran an article, "Long-distance lesson," on its website. See:
http://news.enquirer.com/apps/pbcs.dll/article?AID=/20060302/NEWS0102/603020352/1077

2. North Carolina School Contact - a Success

A successful contact was experienced by the students at Harry Hallyburton Elementary School in Drexel, North Carolina on March 3. The contact was a telebridge via the station VK5ZAI in Australia; the phone line was donated by Verizon Conferencing. Bill McArthur, KC5ACR, answered 19 questions posed to him by 19 third graders as a crowd of students, teachers, parents and the school superintendent looked on.

At least one local newspaper covered the event. The audio was fed through the EchoLink AMSAT (node 101 377) and JK1ZRW (node 277 208) conference rooms and fifty-one connections were made. Among the stations from 15 countries

listening in were the Czech Republic, Iraq, and Trinidade and Martim Vaz Islands. Seven nodes connected to IRLP from 3 countries. Audio was also available over the internet. The News Herald posted a story, "A Message from A Moon Walker," on its website. See: http://www.morganton.com/servlet/Satellite?pagename=MNH/MGArticle/MNH_BasicArticle&c=MGArticle&cid=1137834516087

Evangelisches Gymnasium Lippstadt in Lippstadt, Nordrhein-Westfalen, Germany completed a contact with the ISS on Wednesday, March 8.

3. Upcoming School Contacts

Bowie High School in Bowie, Maryland has been approved for a contact which will take place on Friday, March 17 at 15:10 UTC, direct via station KB3KAR.

Cleveland Heights High School in Cleveland Heights, Ohio has been scheduled for an ARISS contact on Friday, March 17 at 16:44 UTC.

4. Audio of Discover Engineering Family Day Contact Available

The National Building Museum has posted audio of the ARISS contact from the Discover Engineering Family Day on its website.
See: http://www.nbm.org/Events/transcripts.html
Select "International Space Station Teleconference."

6. Astronaut Training Status

On February 28, astronauts Jim Dutton, Shane Kimbrough, and Tom Marshburn passed their amateur radio exams. Their callsigns will be issued in the near future.

[ANS thanks Carol, KB3LKI for the above information]

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In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

73,
This week's ANS Editor,
JoAnne Maenpaa, WB9JEJ